



Calc-YOU-late Magnitudes

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Curriculum Area	Mathematics
Subject Area	Numerical Patterns/Place Values
Grade Level	1 st grade
Learning Objectives	<ul style="list-style-type: none"> • The student will be able to open the calculator on the computer under Microsoft-Programs-Accessories-Calculators or the Macintosh-Menu bar; or appropriately use a hand-held calculator. • The student will be able to correctly enter a specified number on a calculator. • The student will be able to recognize the change in a number by simply adding a number in the ones, tens, or hundreds place and describe what happened. • The student will be able to predict what will happen when a number ending in zero will be added or subtracted.
Correlation to the SOL	Math 1.2, 1.21, 1.7 C/T 5.2, 5.4
Video/Technology Hardware/Software Needed	<p>For class: Computer (if using this technology) Computer Projection System (if using this technology) Built-in calculator program for system software (if using this technology)</p> <p>For each student: Computer or calculator Built-in calculator program for system software (if using this technology)</p>
Materials Required	<p>For class: Overhead Projector with transparency and transparency markers or board</p>
Procedures/Activities	<ol style="list-style-type: none"> 1. Have the students open the computers. Review the commands needed. For the computer, instruct them on either using mouse to drag and click or use number keys, or have students turn on their hand-held calculator. 2. Give the students a warm-up drill by giving them certain numbers to punch in. 3. Ask the students to key in a number with three different numbers, so as not to be confusing (i.e., 257). You may want to write this on the overhead or board to insure they have the correct number. 4. Ask them now to punch in "1 +" and to notice what is happening in the ones column. Ask them to describe what happened. Do this several times until they understand what the pattern is.

	<ol style="list-style-type: none"> 5. Go back to your original number and ask them to punch in "10 +" and to notice what happens in the tens column. Do this several times until they understand what the pattern is and why it is happening. 6. Go back to the original number again and repeat with numbers of "100 +" and again ask them to notice what is happening in the hundreds column. 7. You may want to write some of these numbers on the overhead and ask them to see the pattern that is being created. They may be able to see better when given a series of numbers. 8. Review by having them again identify the ones, tens, and hundreds column and ask about the changes. 9. For additional practice, write problems on the overhead or the blackboard for them to add or subtract using ones, tens, or hundreds only.
Content Assessment	<p>Teacher will observe and evaluate students based on the following questions:</p> <p>Were the students able to describe what was happening when the stated magnitude was added or subtracted?</p> <p>Were the students able to locate and identify the ones, tens, and hundreds column?</p> <p>Were the students able to see the pattern developing when certain magnitudes of the numbers were added?</p> <p>Were the students able to correctly carry out the simple functions of addition and subtraction on the calculators?</p>
Technology Integration Assessment	<p>Teacher will observe and evaluate students based on the following questions:</p> <p>Were the students able to properly open and handle the calculators?</p> <p>Were the students able to carry out the functions of the given assignments using the calculators?</p>
Extensions	<p>Math:</p> <ul style="list-style-type: none"> • Have the students work with counting of pennies, dimes, and dollars to see the magnitude in numbers in the ones, tens, and hundreds place. • Enrich your lesson with ITV program <i>Math Monsters: #106 The Making of Tens</i> and <i>Math Monsters: #107 Doubles and Their Neighbors</i>. Both of these programs last 15 minutes and are geared for K-2 grades. • Have the students pair off with one student giving the number and magnitude to be added, while the other performs the function. Rotate. <p>Art:</p> <ul style="list-style-type: none"> • Have students try to create visual patterns where one element of a simple pattern changes and the other elements stay the same.